

**NATURAL RESOURCES CONSERVATION SERVICE
CONSERVATION PRACTICE STANDARD
*SOUTH DAKOTA SUPPLEMENTS ITALICIZED***

RECREATION LAND GRADING AND SHAPING

(ac.)
CODE 566

DEFINITION

Altering the surface of the land to meet the requirements of recreation facilities.

PURPOSE

This standard may be applied as part of a resource management system to support one or more of the following:

To permit effective use of the land area for recreation;

Improve surface drainage for recreation use;

Obtain more uniform soil depths.

CONDITIONS WHERE PRACTICE APPLIES

This standard applies where modification of the land surface is required to permit installation of recreation facilities.

The standard is appropriate on sites where surface irregularities, slopes, kinds of soil, depth of soil, obstructions, or wetness interfere with planned recreational use; or where such use requires designed land surfaces.

Special attention shall be given to maintaining or improving habitat for fish and wildlife where applicable.

PLANNING CONSIDERATIONS

Water Quantity

Effects of grading on runoff and surface storage.

Effects of the amount and timing of decreased infiltration on evapotranspiration, change in soil moisture in the root zone, and deep percolation.

Water Quality

Effects of erosion and sediment yield on changes in runoff. Factors are the slope of the land before and after grading, the results caused by the construction process, and the amount of vegetation reestablished on the graded or shaped site.

Effects on ground water quality of decreased loading of dissolved pollutants, particularly the dissolved nutrients from decaying surface residues.

Effects of increased recreation and activities on the quality of both surface and ground water quality.

CRITERIA

Laws and Regulations. *This practice must conform to all federal, state, and local laws and regulations. Laws and regulations of particular concern include those involving water rights, land use, land disturbance by construction, pollution control, property easements, wetlands, preservation of cultural resources, and endangered species.*

Design and installation shall be based on adequate engineering surveys and soil investigations. If the land is to be modified for more than one purpose, it must be shaped to meet requirements of the most restrictive purpose.

All work must be designed within slope limits required for the proposed use and provide for the removal of excess surface water. If other conservation practices such as grassed waterways, drainage ditches, irrigation systems, and filter strips are needed to accomplish the stated purpose, they shall be included in plans for improvement.

Shaping. If only shaping is required, the cuts and fills may be estimated by observation or by a minimum amount of work with engineer's level.

Conservation practice standards are reviewed periodically and updated if needed. The current version of this standard is posted on our website at www.sd.nrcs.usda.gov or may be obtained at your local Natural Resources Conservation Service.

Grading. If grading to uniform surfaces is required, the design shall be based on a complete topographic or grid survey.

Erosion control and drainage. The requirements for erosion control and surface and subsurface drainage shall be included in the plan.

The recreation area should be protected from foreign runoff by adequate conservation measures.

The design for the area to be shaped and graded must dispose of excess water in a nonerosive manner. Where necessary to prevent erosion, structures must be included in the design.

Specific uses. Grading and shaping for specific uses, such as athletic fields shall be according to the requirements of the intended use.

Vegetation. Distributed areas shall be established to vegetation as soon as practicable after grading. Seedbed preparation, seeding, fertilizing, and mulching shall comply with the standard for Critical Area Planting (342).

Special attention must be given to saving and maintaining key trees and other vegetation that provide shade, reduce erosion and runoff, provide cover and food for wildlife, or add to the visual quality of the area. Equipment travel or parking shall not be allowed within an imaginary circle on the ground defined by the dripline of the crown of any tree chosen to be saved.

Safety. The design must incorporate safety features that consider the proposed use of the area and meet applicable building and safety codes.

PLANS AND SPECIFICATIONS

Plans and specifications for recreation land grading and shaping shall be in keeping with this standard and shall describe the requirements for applying the practice to achieve its intended purpose.

OPERATION AND MAINTENANCE

An Operation and Maintenance Plan must be prepared for use by the landowner or operator responsible for operation and maintenance. The plan should provide specific instruction for operating and maintaining trails and walkways to insure they function properly. Minimum requirements to be addressed in the Operation and Maintenance Plan are:

Maintain recreation land surfaces in good condition, which includes replacement or addition

of surface material when necessary. Prevent surface ponding by localized grading or addition of surface materials (i.e., aggregate, mulch, topsoil) to remove depressions. Replace protective vegetation as soon as possible.

Repair or replace soil, vegetation, mulches, aggregate, etc. in areas damaged by erosion or heavy use.

Remove debris and litter from recreation areas, adjoining land areas, ditches, and drainage facilities.

Remove debris or blockage in drainage ditches, drop inlets, culverts, bridges, waterways and storm water outlets. Maintain drainage facility capacities.

Maintain good vegetative cover on all slopes and watercourses.

Immediately repair any vandalism or vehicular damage to earthfills, slopes, drainage facilities, waterways and storm water outlets or other appurtenances.

List other items specific to this project on the Operation and Maintenance Worksheet.

REFERENCES

USDA-NRCS, National Engineering Field Handbook.

USDA-NRCS, National Engineering Handbook Series.